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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/662,272

09/15/2003

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03/20/2007

EXAMINER

GARRETT, DAWN L

ART UNIT

PAPER NUMBER

1774

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/662,272

Applicant(s)

COSIMBESCU ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-22 is/are pending in the application.
- 4a) Of the above claim(s) 11, 13, 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-10, 12, 14 and 16-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

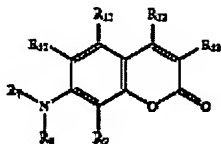
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DETAILED ACTION***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission mailed on December 28, 2006 has been entered.
2. The amendment filed December 28, 2006 has been entered. Claim 1 was amended. Claim 2 is canceled. Claims 1 and 3-22 are present in the application. Claims 11, 13, and 15 are withdrawn as non-elected. Claims 1, 2-10, 12, 14, and 16-22 are currently under consideration.
3. The species under consideration remain as the following:

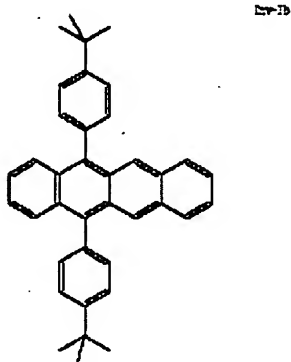
Host: Aluminum trisoxine alone

First Dopant: Formula 2



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Second Dopant: Inv-lb



4. The rejection of claims 1, 3-10, 12, 14, and 16-22 under 35 U.S.C. 112, first paragraph, set forth in the Office action mailed August 28, 2006 is withdrawn due to the amendment of claim 1.

Claim Rejections - 35 USC § 103

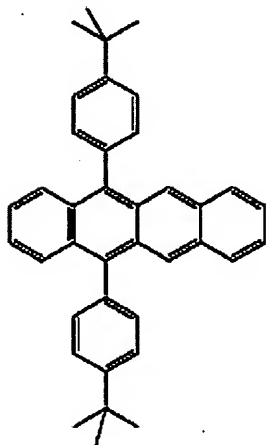
5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-10, 12, 14, and 16-22 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Nakaya et al. (US 6,203,933) in view of Tang et al. (US 4,769,292). Nakaya et al. teaches organic EL elements comprising light emitting layers including a host material such as aluminum complexes having 8-quinolinol as a ligand with regard to the host material aluminum trisoxine (see col. 33, lines 43-48 and 17-28)(“host”). At least one compound according to the Nakaya et al. formula (I) is contained in the light emitting layer in an amount of

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at least 0.1% by weight (see col. 33, lines 29-31) ("second dopant"). The specific formula (I) compound



is taught at col. 11-12 (bottom half of page), compound "1-4". Nakaya et al. further teaches "the light emitting layer may additionally contain another luminescent material in addition to the compound of the general formula (I)" such as those "disclosed in JP 264692/1998" (see col. 33, lines 15-19) ("first dopant"). A patent family equivalent of JP 264692/1998 is Tang et al. (US 4,769,292), which teaches fluorescent coumarin dyes as dopants (see col. 11, line 31 and following). It would have been obvious to one of ordinary skill in the art at the time of the invention to have selected the coumarin dye as an additional luminescent component for the light emitting layer, because Nakaya et al. discloses dyes such as those taught in JP 264692/1998 are suitable and Tang et al. teaches in the U.S. patent equivalent of JP 264692/1998 that coumarin dyes are suitable dopants. A *prima facie* case for combining the host, first dopant, and second dopant has been established and since each of the three materials are the same as applicant's materials, the emission properties of claims 1 and 3 are considered to be inherent. With regard to the dopant amounts, the Nakaya et al. formula (I) compound is used in an amount of preferably

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0.01-20% weight (see col. 33, lines 38-39). The secondary reference teaches the coumarin dye dopants are incorporated into light emitting layers in amounts within the ranges of claims 4-6 (see Tables, col. 35). In addition, it would have been obvious to one of ordinary skill in the art to have included the “additional luminescent component” (“first dopant”) in a similar amount as the formula (I) compound (“second dopant”), because one would expect the additional luminescent component to be similarly incorporated into the device and to perform a similar function as the specifically mention formula (I) luminescent component.

Response to Arguments

7. Applicant's arguments filed January 4, 2007 have been fully considered but they are not persuasive.

The prior rejection under 35 U.S.C. 112, first paragraph, has been withdrawn.

With regard to the 35 U.S.C. 103(a) rejection over Nakaya et al. in view of Tang et al., applicant notes the Examiner “appears to be equating the many species in order to arrive at an art rejection.” Applicant appears to argue that the species are not patentably distinct, and if so, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or *clearly admit* on the record that this was intended, and the election requirement will be withdrawn. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission *may be used in a rejection under 35 U.S.C. 103(a)* of the other invention.

Applicant argues “There is no suggestion or motivation in any of the references to combine any three components for the purpose of improving stability of the light emitting device, especially there is no suggestion to do so without significantly affecting the color of the

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emission. The examiner submits that Nakaya clearly teaches a light emitting layer with the required dopant material in amounts according to the amounts claimed by applicant in claim 5. Furthermore, Nakaya et al. notes that doping is one technique for producing light emission of any desired color (see col. 1, lines 9-10). The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. A prima facie case of obviousness may be rebutted where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215. In addition, since each of the three materials are the same as applicant's materials, the emission properties (i.e., degree of luminescence loss/stabilization improvement, emission color, and bangap relationships) of claims 1 and 3 are considered to be inherent. It is further noted that applicant's use of the term "not significantly affected" is not patentably significant because the term is not associated with a specific degree or range of variance in color.

Applicant argues Nakaya teaches many possible compounds for use in the devices. The examiner agrees many possible compounds are taught; however, applicant has not provided clear and convincing evidence within the scope of the present claims and the scope of the prior art to overcome the art of record. Per M.P.E.P. § 2145, the arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Geiseler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Dawn Garrett
Primary Examiner
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